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**PLANNING THE DEVELOPMENT OF PUBLIC HEALTH**

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**by A. M. Sadomskiy**

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## PLANNING THE DEVELOPMENT OF PUBLIC HEALTH

Following is a complete translation of a book written by A. M. Sadomskiy, entitled as above, Moscow, 1959.<sup>7</sup>

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## 1. Characteristics of Soviet Public Health Services and the Main Stages of Their Development

Concern for the material well-being of the Soviet people is one of the most important tasks of the Communist party of the Soviet Union and of the Soviet government. In its address to the Supreme Soviet in March 1958, before the elections, the Central Committee of the Communist Party of the Soviet Union asserted on this point: "Concern for the well-being and prosperity of the Soviet people, for the satisfaction of their growing material and spiritual needs will in the future also determine the main direction of the activity of the Communist party and the Soviet government. In this concern our Party sees its basic task and the basic meaning of all its work for realizing the behests of the great Lenin." A clear manifestation of such concern is the continuous attention devoted to problems of raising the standard of living of the Soviet people and of protecting their health.

In the last five years alone the Communist Party and the Soviet government undertook a series of large-scale measures aimed at raising the national well-being. The most important of these measures are raising the wages of low-paid workers and employees, lowering of the retail prices of foodstuffs and industrial goods, shortening the work-day by two hours before holidays and on the day before the workers' free day, gradual transition to a seven-and six-hour working day without a reduction in wages, improvement in pension provisions, cessation of the issuing of yearly State loans, establishment of additional privileges for pregnant women and mothers, raising of fixed and purchasing prices for agricultural products delivered and sold by the kolkhozes to the State, and others.

The continuous increase of the real wages of workers and employees, and of kolkhoz members' incomes, is ensured. The consumption by the population of high quality food products is growing from year to year: milk and milk products, animal fats, meat products, eggs and sugar and the provisioning of the population with clothing and shoes is improving. Construction of living quarters is being conducted on a large scale. In 1957 and 1958 alone, 120 million sq. m. of living area were constructed and settled. The Party and the government are undertaking real measures to solve the problems of living quarters completely within 10-12 years. All these measures lead to improvement in the living conditions of Soviet people and strengthening of their health.

In the interests of safeguarding the health of Soviet

people, the State is undertaking large-scale measures in the field of public health. An extensive network of institutions for treatment and prophylactic measures -- as well as children's institutions, sanatoria and rest homes, medical scientific research institutes and educational institutions -- has been established in the USSR and buildings for these institutions have been erected to a considerable extent.

Fund assignments for public health are increasing continuously. While in Tsarist Russia per capita expenditures for public health and physical culture amounted to 91 kopecks, in 1940 these expenditures had increased to 47 rubles, 10 kopecks in our country and in 1956 to 174 rubles, 40 kopecks.

In 1913 there was one doctor for every 10,000 inhabitants in Russia; in 1940 in the USSR there were seven doctors per 10,000 inhabitants and in 1957 medical help was available at the rate of 17 doctors per 10,000 inhabitants.

As a result of the continual increase in the material well-being of the workers and the successful development of Soviet public health care, indices of the health of the population improved. The death rate in the USSR in 1957 had decreased four times as compared with that of 1913 and is the lowest such index in the world. In 1957 the number of deaths in the USSR came to 7.8 per thousand inhabitants, while in the United States the index of the death rate for that year came to 9.6, in Britain 11.5, and in France 12.0.

Indices of the infant death rate decreased even more considerably. In pre-revolutionary Russia 273 children out of every thousand born alive, died before reaching the age of one; in the USSR in 1940, it was only 184 and in 1957--45. Thus, the infant death rate in our country had decreased 6.1 times in 1957 as compared with the pre-revolutionary period, and 4.1 times as compared with the pre-war level.

The average life expectancy of Soviet people in 1955-56 was more than double that of the average life span in Russia in 1913.

Public health care in the USSR is developed on the basis of the following basic principles worked out by V. I. Lenin and laid down in the program of the Party: it must be undertaken by the State and must be planned; all qualified medical help and medications must be free and available to the entire population.

A characteristic of public health care in the USSR is its prophylactic nature. Prevention of illness among the population is a fundamental principle of the activity of all organs and institutions of the public health service; the measures undertaken by the State for increasing the construction of living quarters and social-cultural buildings, for improving labor conditions of workers and peasants and

making them more healthy, and for protecting the atmosphere, soil and reservoirs in cities and inhabited settlements from pollution by waste from industrial enterprises facilitates this activity.

The state and preventive nature of Soviet public health care, the planned nature of its development, the fact that medical help is free and available to all--those are the basic principles which distinguish the system of Soviet public health care from that of foreign capitalist countries. Because of enormous expenditures for military purposes in the United States, Britain, France and other capitalist countries, fund assignments for the needs of public health are being continually reduced.

In capitalist countries the obligations of the state in the field of public health are confined mainly to sanitary legislation and a state sanitation service. Medical help for the population is offered mainly by private medical practitioners and by private capitalist medical organizations which render medical help for a high rate of payment. For this reason, medical help under conditions prevailing in capitalist states is accessible only to the well-to-do strata of the population and is seldom available to workers. There is no plan whatever in the development of the network of institutions of public health and the distribution of medical institutions and doctors. In the United States, for example, regardless of the existence of a considerable number of hospitals (which require payment) in the largest cities, almost one-third of the population is deprived of normal medical services.

The advantages of the Soviet socialist system and of the Soviet system of public health care permitted the realization, in a historically short period, of a great upswing in the development of a network of medical-preventive, children's and sanatoria-health resort institutions and also in training medical cadres.

The development of a network of public health institutions, training of medical cadres and the availability to the population of medical help in our country are characterized by the following basic indices [see table on page 72].

As can be seen from the data cited below, in 1957 the network of hospitals and other public health institutions had been developed considerably as compared with 1913. This is explained by the fact that Soviet public health care was organized and developed in the course of socialist construction on the basis of the planned development of the economy of the USSR.

The first stage in the development of Soviet public health care was the creation of State public health organs,

the realization of measures for the struggle against devastation and for sanitary measures in the country, unification of public health institutions of the various departments into a single system and the reconstruction and further expansion of these institutions.

For this reason and in order to ensure unified leadership in public health services and the organization of the fulfillment by all possible means of the tasks already enumerated, the decree of 11 July 1918, signed by V. I. Lenin set up a People's Commissariat of Health (Narkomzdrav) RSFSR. With the help of the Party and the government, the Narkomzdrav RSFSR fulfilled the tasks imposed on it.

A great role in sanitation measures for the country was also played by a number of other decrees of the Council of People's Commissars RSFSR, which were issued at that time: "On compulsory smallpox vaccination" (1919), "On measures for the struggle with typhus and relapsing fever" (1921), "On the establishment of sanitation organs of the Republic" (1922) and a number of others.

In 1929 the CC VKP (b) [Central Committee, All-Union Communist Party (Bolshevik)] remarked on the lag of public health measures behind the needs of the country and set the task of improving medical care for workers of industrial enterprises and peasants in connection with kolkhoz and sovnarkhoz construction.

After this very important resolution of the CC VKP (B), a new stage in the development of public health service began, in accordance with the tasks elicited by socialist construction.

In 1929 the tasks for the development of public health services were included in the five-year plans for the development of the country's economy, and the network of public health institutions began to grow rapidly.

In the years of the First Five-Year Plan (1928-32) the number of hospital beds in cities increased 1.6 times and reached 256,158 in 1932; the number of health points in industrial enterprises increased to 6,139 within the same period, i. e. was tripled, while the number of rural medical offices increased to 9,883. The number of places in permanent child nurseries in cities increased five times in the First Five-Year Plan and reached 273,800, while in rural areas it grew more than 40 times and reached 342,000.

In 1932, on the basis of the directives of the 17th All-Union Party Congress, the Narkomzdrav RSFSR worked out a draft plan for the development of public health services in the Second Five-Year Plan. This draft was discussed in May 1932 at the First All-Union conference on planning public health and workers' rest [programs]. At this conference the task was put on the agenda of working out norms of

population needs for various kinds of medical services, and with regard to some of these norms--for example, the need for hospital and polyclinic services--recommendations were made.

The data on expenditures for public health physical culture and workers' rest programs, which amounted to 19.6 billion rubles in the Second Five-Year Plan, as opposed to 5.4 billion rubles in the First Five-Year Plan, bear witness to the degree of the growth of public health services in the Second Five-Year Plan.

In 1938 the Council of People's Commissars USSR adopted a special resolution of strengthening public health care in rural areas, providing for the establishment in the union republics of 11,785 rural medical departments and 11,000 offices of fel'dshers and fel'dsher obstetrical points.

In March 1939 the 18th Party Congress approved the Third Five-Year Plan for the development of the economy of the USSR for 1938-1942, which provided for a program of further considerable development of public health services. Assignments of funds for public health services were to be increased from 10.3 billion rubles in 1937 to 16.5 billion rubles in 1942. However, the treacherous attack of the Hitlerite invaders on our country in 1941 brought the fulfillment of the Third Five-Year Plan to a halt.

In the period of the Great Patriotic War in 1941-45 the Soviet system of public health care demonstrated its enormous advantages. The planned and centralized organization of public health care in the country, the existence of a developed network of medical-prophylactic and sanitation-anti-epidemic institutions, of scientific research institutes and laboratories, a broad system of training medical cadres with higher and secondary education made it possible within a short time to mobilize all existing medical-sanitation forces and material resources and send them for service to the front and rear. An adequate network of front-line and evacuation hospitals was established, the best cadres of surgeons, therapists and other medical specialists and tens of thousands of nurses carried on a selfless struggle for saving the wounded and sick fighters of the Soviet army. More than 72 percent of the wounded and sick fighters were returned to the ranks. The sanitary-epidemic well-being of the country was preserved. The civilian network of institutions of public health not only was not reduced in this period but it even increased.

In the postwar period, during the Fourth and Fifth Five-Year Plans, the development of the network of institutions of public health advanced considerably as far as a



number of very important indices were concerned, in comparison with the prewar year of 1940. The number of hospital beds had increased by 1955 to 1288.6 thousand, or by 63 percent. The number of beds in obstetric clinics reached 172.4 thousand, the number of places in nurseries 907.2 thousand.

Annual increases in network indices of public health grew considerably in the first three years of the Sixth Five-Year Plan. While in the Fifth Five-Year Plan the average increase in the number of hospital beds amounted to 55.6 thousand, in 1956 the annual increase in the number of hospital beds amounted to 71.9 thousand and in 1958 the increase of hospital beds was fixed in the plan at 80,000. Accordingly, also, the increase in places in nurseries in 1956 amounted to 58,000 while it was planned for 82,000 for the year 1958, with an average annual increase of 26,000 in the Fifth Five-Year Plan.

An important achievement of Soviet public health care, which emphasizes its prophylactic nature, is the establishment during the years of Soviet power of a considerable network of sanatoria and houses of rest. In pre-revolutionary Russia, regardless of the existence of many mineral curative springs, there were no more than 3,000 places in the small number of existing sanatoria. Rest homes simply did not exist. The workers had no access to the sanatoria, as there were only a few in existence and payments exacted for treatment were high. It was only after the great October socialist revolution that a network of sanatoria and rest homes was widely developed and put entirely at the service of the broad masses of workers. The total number of sanatoria in 1957 amounted to 294,000, including 112,000 children's sanatoria and 159,000 rest homes. Health resorts of such All-Union scope as Sochi-Matsestin, the Southern shore of the Crimea, the mineral waters of the Caucasus, Tskhaltubo, the mineral waters of Sergiyev and many others were greatly developed in the USSR. Large health resorts were established in the Urals, Siberia and the Far East, as well as the Ukraine, Kazakhstan and the Central Asian and other union republics. In 1957 more than 5.6 million workers received treatment in sanatoria and rest homes.

Side by side with the quantitative increase in network indices of public health in the past 10-15 years, broad State measures were undertaken for improving the quality of medical services for the people. Starting in 1947 the unification of hospitals and out-patient polyclinic institutions was carried out. The establishment of unified hospital-polyclinic institutions was meant to improve the quality of medical treatment and preventive measures. The independent and isolated existence of polyclinics, consulta-

tion centers, and dispensaries led to an artificial division of physicians who worked in these institutions and those of the clinics, hospitals and obstetric clinics. This circumstance could not fail to lower the level of their qualifications and, consequently, also lowered the quality of medical and prophylactic services to the people. In combined hospital-polyclinic institutions conditions were created which made it possible to achieve continuity in giving the sick in-patient and out-patient polyclinic aid. The physician had an opportunity to observe and treat patients in the polyclinic as well as in the hospitals. Doctors in the out-patient polyclinics, working under hospital conditions, had broad possibilities for heightening their qualifications.

The unification of out-patient-polyclinic institutions with hospitals also promoted the abolition of small independent institutions. In accordance with the decree of the Council of Ministers USSR of 31 October 1949, the Ministry of Health USSR established a single list and standard categories of medical-prophylactic institutions according to their capacity, depending on the number of beds. Recognized as standard medical institutions were hospitals with a polyclinic; hospitals attached to an industrial enterprise, included in the medical-sanitation department, with a polyclinic; children's hospitals with pediatric consultation and a polyclinic; obstetric clinic with obstetric consultation and dispensaries with a corresponding hospital.

Before the above-mentioned decree 190,000 independent institutions of public health services existed within the system of the Ministry of Health USSR alone; there was also included a considerable number of small ones. After the establishment of a single list, institutions of public health grew larger, and the number of institutions was reduced to 140.4 thousand. This led to the creation of conditions for a more effective utilization of medical technique, unnecessary posts in the administrative-economic staff were to a considerable degree abolished, and medical specialists began to be used more correctly.

An important measure for improving the quality of medical service was the introduction in 1938 of the territorial division principle in the outpatient polyclinic services for the city population. A divisional physician-therapist with a territory including no more than 4,000 persons and a divisional pediatrician with a territory having no more than 1,200 children below the age of 14, treat patients in hospitals (in a unified hospital-polyclinic institution), in a polyclinic (ambulatory), and at home.

In order to improve medical service and the organization of care for patients at home, the divisional doctor

has an efficient assistant at his disposal--a medical nurse. In addition to medical work, divisional doctors observe the sanitary-epidemic situation and the incidence of illness in the population of the territory of their division and undertake sanitation measures. In unified hospital-polyclinic institutions measures are undertaken for further strengthening the divisional principle of medical service to the population. In order to lighten the work of divisional physicians a system of work was adopted for divisional physicians: in hospitals, polyclinics, dispensaries and in the division. Measures are being adopted for reducing the divisions in size, as far as the number of persons included in it is concerned. The number of city medical divisions has increased from 10,296 in 1946 to 18,836 in 1956.

Organs of public health, with the help of soviet and Party organizations, devote much attention to the fulfillment of the tasks of giving preference in medical service to workers in industrial enterprises. For this purpose a wide-spread network of medical sanitary departments and health units was organized in industrial enterprises. In 1956, 964 medical-sanitary departments were active in enterprises. There were 84,970 beds in the hospitals attached to them and, in addition, there were 6,415 health units and 13,564 doctors assistant health units at work in enterprises.

A very important principle of the work of medical-sanitary departments is the partition of the enterprises serviced by them into divisions. As a rule, a division corresponds to a shop in the enterprise. Shop physicians of unified hospital-polyclinics, in addition to medical work in the hospital or polyclinic, also carry on sanitary-prophylactic and sanitation work in the shops of the enterprise. They take measures for removing the causes of illness and injuries among workers and for making work conditions better and more sanitary. Medical workers of the health units also carry on much sanitation work directly in the shops of the enterprise, in addition to giving medical help to workers who fall ill. A considerable network of night sanatoria (prophylactoria) has been set up for workers in industrial enterprises, where workers after hours can get food and a night's rest under good conditions and can be treated medically. In 1956, 585 night sanatoria with 20.7 places were in existence.

A very characteristic index of the improvement in the quality of hospital services to the population is the consistent increase in the number of specialized hospital beds. In 1956 the number of specialized therapeutic beds increased to 254,982, or 2.9 times that of 1940; in the same

years the number of surgical and children's beds more than doubled and those for tubercular cases increased by 3.7 times.

In order to make highly qualified medical aid available to the rural population, a network of oblast, kray and republic hospitals has been set up--these hospitals now number 158. Rural rayon hospital staffs are being reinforced by qualified medical cadres. For example, the number of surgeons in rural medical institutions has grown to 4,233 by 1956 as against 2,117 in 1947; in the same period the number of obstetricians-gynecologists had correspondingly increased to 3,037 as opposed to 1,395, the number of pediatricians to 3,599 as against 2,329 and phthisis specialists to 1,435 as against 344. Oblast and rayon hospitals fulfill the functions of methodological centers in directing medical work in oblasts and rayons.

The quality of rural medical divisions is changing--the number of medical divisions with hospital beds is increasing--and, as a result, the number of ambulatory medical divisions without hospital beds is decreasing. In the period from 1947 to 1956 the number of divisional hospitals increased to 6,119 and the number of ambulatory medical divisions was reduced to 3,137. The supply of up-to-date medical apparatus to medical prophylactic institutions has improved in the cities as well as in rural areas: by 1956 the number of X-ray cabinets and departments had increased to 17,648, the number of physical therapy departments to 10,262, and the number of clinical-diagnostic laboratories to 18,183.

The training of doctors is being broadened. The number of higher medical educational institutions in the years 1940-1956 increased from 72 to 77 and the number of students in them from 116 to 142.9 thousand; the total number of physicians in the country increased from 140.7 thousand in 1940 to 346.0 thousand in 1957.

Finally, we must mention the great significance of the solution of the task of supplying medical-sanitary institutions with the necessary effective medicines and with up-to-date medical instruments, apparatus, and tools. The party and the Soviet government devoted constant attention to the solution of this important task. The medical industry in the years of Soviet power has become an independent and many-sided branch of the economy. This is attested by the increase in the number of enterprises of the medical industry and by the gross production and the list of manufactured products. The number of enterprises of the medical industry of All-Union scope increased from 26 in 1937 to 99 in 1957. The gross production of the medical industry of All-Union scope including the galeno-pharmaceutical industry of the union republics, amounted to 174.0 million rubles in 1937 (in 1955 wholesale prices). Medical industry has de-

veloped especially rapidly in the most recent period. The production of articles of the medical industry had increased six times in 1956 as compared with 1945, while the production of antibiotics (penicillin, biomycin, streptomycin, sintomycin and others) had increased 14.5 times in the 1950-56 period. The number of chemical-pharmaceutical preparations reached 860. The assortment of medical instruments and apparatus was expanded from 627 types in 1946 to 1,575 in 1956. The production of medical and prophylactic serums and vaccines has also increased. In accordance with the needs of the chemical-pharmaceutic industry, serum and vaccine production, and institutions of public health service and pharmacies, the production capacities of medical glass have been increased.

In spite of considerable achievements in the development of Soviet public health services, they still lag behind the rate of development of the economy of the country and the ever-growing cultural demands of the population, and substantial shortcomings exist in several important subdivisions of public health services. The first secretary of the CC CPSU, Comrade N. S. Khrushchev, in the report of the Central Committee of the Communist Party of the Soviet Union to the 20th Party Congress said, concerning the successes, shortcomings, and tasks in the field of public health: "One of the most important tasks is the further improvement of national public health services. Our successes in this field are well known. But in this field also serious shortcomings exist, especially in rural areas. In the coming years we must achieve considerable expansion of the network of medical institutions and improvement of their work."<sup>1</sup>

Planning organs and organs of public health must be guided in their work by the basic tasks for the further development of public health services mapped out by the Party and the State and must provide measures for their in the State plans for the development of the economy.

One of the most important tasks, which must be solved in the coming years, is the further expansion of the network of hospital-polyclinic institutions to meet the needs of the population. The need for hospital aid is as yet not fully satisfied. Some polyclinic divisions of the unified institutions and independent ambulatory-polyclinic institutions are overloaded with work. In general, there were 70

<sup>1</sup> N. S. Khrushchev: "Report of the Central Committee of the Communist Party of the Soviet Union to the 20th Party Congress," 1956, p. 93.

hospital beds for every 10,000 inhabitants in the USSR in 1957, while an average of no less than 100 were needed.

The USSR still lags behind a number of foreign capitalist countries in the number of hospital beds per 10,000 inhabitants. In 1952-1953 this index was: USA--98 beds, Britain--115, France--114 and Western Germany--103.

From the figures cited it does not naturally follow that hospital service is well organized in capitalist countries. Under conditions in a socialist state, with free medical service and observance of the principle of bringing medical aid close to the population, the network of institutions of public health now in existence and its further expansion are subordinated to one goal--the improvement of medical services for the entire population. In capitalist countries, however, hospital services must be paid for and are thus not accessible to all workers; they can be used chiefly by the well-to-do strata of the population.

Expansion of the network of hospitals is made necessary by more than the annual population increase and by the need for overcoming backwardness in making hospitalization available to the population. The problem consists in improving hospital-polyclinic services for the population of large cities, industrial centers, new construction projects and rayons of newly cultivated virgin and fallow lands. The rapid rate of population increases, the great economic-political tasks confronting the workers of these cities, construction projects and rayons, require a corresponding level of cultural and medical services.

Of especially great significance are the problems in improving medical services for the rural population. The total of medical services in rural areas available to the population still lags behind the level of medical services available in the cities. The number of hospital beds per 10,000 inhabitants in rural areas amounted to an average of 26 in 1955. A great part of the rural populations turns to urban medical-prophylactic institutions for medical help. Up to 20 percent of the fund of hospital beds in city medical-prophylactic institutions is occupied by patients living in rural areas. Naturally, medical services for the rural population in city hospitals will also continue in the future in the most specialized kinds of medical help; however, the basic task is to bring as much highly qualified medical help as possible to the workers of kolkhozes and sovnarkhozes. In connection with this, rural medical-prophylactic institutions must continue to be enlarged; primarily, rayon and divisional rural hospitals must be made larger, so that it may be possible to have specialized medical services, utilizing up-to-date medical apparatus and techniques.

In rural areas there is a distinct lack of physicians: In 1958 there were 36,686 physicians in the villages. In the years of the Fifth Five-Year Plan the number of doctors in the villages increased by only 1,500. Thus, in the coming years, problems in the development of public health services in the villages will be solved, such as considerable expansion in the network of hospitals, increasing the size of hospitals, improving the supply of medical apparatus for them and ensuring a more adequate supply of physicians-cadres.

In order to raise the quality of medical services, the expansion of the network of hospitals in both urban and rural areas must be undertaken mainly in the number of specialized hospital beds: therapeutic, surgical, tubercular, children's psycho-neurological and obstetric institutions.

Regardless of its rapid rate of development, the network of nurseries is still insufficient and does not fully satisfy the need of working women for them. In the years of the Fifth Five-Year Plan, the network of nurseries increased to 133,000 places; however, the assignment for an increase in places in nurseries for this period was not completely fulfilled. Already in 1954 the Gosplan USSR, as well as ministries and departments, were ordered to provide in the 1955-1957 economic plans for the construction of nurseries on a scale such as to ensure placement of children of working women in nurseries according to their needs. However, this measure is not yet fulfilled, although the rate of growth of the network of nurseries and of their construction was considerably increased. In 1956 places in nurseries throughout the USSR increased by 61.1 thousand, and in 1957 about 80,000. In 1955, a total of 22.5 million women were employed in the economy of the USSR, while there were 865,000 places in permanent nurseries at the end of that year (without counting the permanent nurseries in kolkhozes with 41,000 places); there were 3.8 places in nurseries available for every 100 working women, while the average norm was 6.8. In the report to the 20th Congress of the CPSU Comrade N. S. Khrushchev said, concerning the development of the network of children's institutions: "... we must begin to solve the second enormous educational task --ensuring to all children of nursery and preschool age whose parents wish it, an education in state nurseries and kindergartens. Considerable time will be needed for the complete solution of this problem, but we must begin this work along broad lines during the current five-year period."

Great tasks confront Party, economic and soviet organizations and planning and medical organs in the construct-

ion of institutions of public health. During the years of Soviet power the construction of hospitals, obstetric clinics, polyclinics and dispensaries, nurseries and other public health institutions was carried on on a large scale. This construction was particularly expanded in the postwar years --the years of the Fourth, Fifth and Sixth Five-Year Plans; this is attested by the following figures.

State Capital Investments in the Construction and Operation of Hospitals, Polyclinics and Nurseries<sup>1</sup>

	Hospitals & Polyclinics (thousands of beds)	Nurseries (thousands of places)
1918-1928	5.7	14.2
First Five-Year Plan (1929-1932)	10.7	23.7
Second Five-Year Plan (1933-1937)	19.9	113.7
Three years of Third Five-Year Plan (1938-1940)	28.7	138.3
War years (1941-1945)	23.5	22.3
Fourth Five-Year Plan (1946-1950)	63.5	36.4
Fifth Five-Year Plan (1951-1955)	77.3	141.6
Two Years of Sixth Five-Year Plan (1956-1957)	45.3	77.2

Not one single country in the world can compare with the USSR in the scope of construction of public health institutions. However, we must take into account that the rate of construction of medical prophylactic and children's institutions is still too slow in our country. For this reason, in view of the lack of newly built special buildings, a part of the hospitals, polyclinics and other medical-prophylactic institutions are organized in adapted buildings which do not always correspond to the necessary requirements. The scale of construction of buildings for nurseries holds back the development of the network of these institutions.

There is also a need for the further considerable development of the medical industry, especially in the field of the production of antibiotics and other drugs necessary for supplying the population with medicines, as well as of the latest medical equipment for public health institutions.

In comrade N. S. Khrushchev's report at the 21st Con-

<sup>1</sup> "USSR in Number", 1958, p. 451.



gress of the CPSU, a broad program is mapped out for the further improvement of public health services in the USSR. All State expenditures connected with the further improvement of public health services for the population of our country will amount to almost 360 billion rubles during the Seven-Year Plan. The control figures for the years 1959-1965 provide for capital investments for the construction of public health institutions, institutions of social maintenance, physical culture and sports and for the medical industry--up to a total of 25.4 billion rubles, or 80 percent more than in 1952-58. This will make it possible in 1959-1965, by building new places in nurseries to double the number of hospital beds in use and to increase them by more than one and a half times as compared with the increase in the previous seven-year period.<sup>3</sup>

In the interests of further improving medical services for the population and creating the most favorable conditions for the work of physicians, they are to be provided with free living quarters, with light and heat, in hospitals in workers' settlements, rayon centers and rural localities.

In the coming seven-year period the medical industry will be considerably developed, especially the production of antibiotics and other up-to-date effective means of treatment. With a total growth in the production of medical articles in 1965 of about three times that in 1958, the production of antibiotics will grow 3.7 times, that of vitamins six times, that of medical instruments and apparatus--including apparatus for the utilization of atomic energy for medical purposes--2-2.5 times.

In the interests of creating more favorable conditions for the aged, it is planned to organize the construction of boarding houses for them on a large scale in the cities as well as in the villages. The State, the trade unions and the kolkhozes are planning to assign the necessary funds for this purpose.

The fulfillment of these extensive tasks in the further development of public health care, which were set by the Party and the government and laid down in the control figures for the development of the economy of the USSR in 1959-1965, will make it possible to improve radically medical services for the population of the country.

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<sup>3</sup> "Control Figures for the Development of the Economy of the USSR for 1959-1965", pp. 99-100.

## 2. Indices of the Plan for the Development of Public Health Services and the System of Approving Them.

The state character of public health care and the socialist economic system in the USSR guarantee the planned development of public health services in accordance with the demands and needs of the population. The planned nature of the development of public health services makes it possible to supply the population with continually improving medical services of all kinds.

The correct planning of public health services depends to a great extent on the scientific and practical basis of the methodology of planning.

Planning of the development of public health services is based on the following theses:

- a) the plan for the development of public health services is a part of the economic plan and must correspond to its basic tasks and be coordinated with its other parts;
- b) in working out the plan the most important general tasks of Soviet public health services must be taken into account: providing priority medical care for workers in industrial enterprises, developing specialized medical aid in cities and rural areas, developing measures for the protection of mothers and children, State sanitation measures, as well as other concrete tasks which confront public health organs during the planned period;
- c) the plan is worked out on the basis of observing the correct proportions between the planned degrees of growth in the network of public health institutions and their material base; construction of the necessary number of buildings, training of medical cadres, production of articles of the medical industry, assignment of the necessary amount of means of transport and economic equipment and sufficient financing;
- d) the plan is worked out on the basis of scientifically confirmed or practically proven norms of the needs of the population for all kinds of medical aid and drugs. The plan determines the basic indices for the development of public health care: "the number of hospital beds," "the number of places in permanent nurseries," "the number of places on the day of maximum use in sanatoria," and "the number of places on the day of maximum use in rest homes" --which reflect the basic tasks in the development of the network of institutions of public health.

Each one of the above-mentioned indices has its content. The index "the number of hospital beds" includes the

number of hospital beds at the end of the planned year in cities, rural areas and in psychoneurological hospitals. The number of planned beds includes beds in medical hospital institutions of all councils of ministers of union republics, ministries and departments. The number of hospital beds does not include the nonmedical beds--fel'dsher, fel'dsher-obstetric and obstetric institutions, and kolkhoz obstetric institutions.

The index "the number of hospital beds in cities" includes beds of all medical-prophylactic institutions in cities and workers' settlements, as well as in clinics and hospitals of medical and scientific research institutes and military hospitals for invalids of the Patriotic War. The number of hospital beds in cities does not include beds in temporary institutions, organized at the expense of the epidemic fund, beds in psychoneurological hospitals, a psychoneurological department of city hospitals, of psychiatric colonies and psychoneurological treatment centers.

The index "the number of hospital beds in rural area" includes beds in rural rayon, divisional and other hospitals, obstetric centers in rural populated settlements, as well as in hospitals for workers and employees and members of their families in the timber and peat industries, in sovnarkhozes, repair-technical and machine tractor stations. This index does not include beds in psychoneurological institutions.

The index "the number of places in permanent nurseries" includes the number of places in nurseries in the cities and in rural areas, which appear in the State budget in the estimates of public health organs, economic councils and other departments. The number of places in nurseries supported by kolkhoz funds and by funds of handicraft cooperatives and other cooperative organizations are listed under a separate heading.

The index "the number of places on the day of maximum use in sanatoria and rest homes" includes the number of places available each year on 15 August (the day of maximum use) in sanatoria of all kinds except the night sanatoria (prophylactic sanatoria) and in all rest homes except the one-day houses. Planning of places in sanatoria and rest homes for the day of maximum use is done because a considerable number of sanatoria and houses of rest are seasonal and function mainly in the summer period. In addition, year-round sanatoria and rest homes considerably expand their activity in the summer.

The plans contain an estimated index "the number of positions for doctors in medico-sanitary institutions." This index includes positions in medico-sanitary institutions in cities and rural areas, in addition to those in

scientific-research institutions, medical institutes and in the apparatus of organs of the public health service. The index "the number of doctors' positions in medico-sanitary institutions" is the basis for estimating the needs for physicians' cadres and is an index of the plan for the development of the network of ambulatory-polyclinic institutions which is not included in the combined hospital-polyclinics:

One of the indices of the plan for capital construction of public health projects, in addition to the volume of capital investments, is the establishment of hospital beds and places in nurseries, in sanatoria and rest homes. The above-mentioned indices include tasks for the construction of public health institutions in all ministries, departments and councils of ministers of the union republics.

Assignments for the development of the medical industry as an independent sector of the economy are reflected in the plans by indices of the gross productions expressed in costs and by the list of the most important medical preparations and articles expressed in kind. In connection with the transfer of enterprises of the medical industry of All-Union scope from the jurisdiction of the Ministry of Health USSR to the jurisdiction of the economic councils of the economic administrative rayons, the gross production of the chemical-pharmaceutical industry is listed in the plans of the union republics as a part of the gross production of the chemical industry, while that of the medico-instrument industry is listed as a part of the machine-building industry, that of medical glass as part of the light industry or the building materials industry. The total index of the gross production of the medical industry in the country as a whole or in a union republic includes the gross production of the medical industry of the economic councils and the ministries of public health of the union republics. The plans provide in a special section for capital investments for the construction of enterprises of the medical industry. Measures for the elimination of pollution of the external environment (water, air, and soil) by industrial sewage and wastes are reflected in the plan by the index of expenditures for these purposes. Admissions of students to higher and secondary medical educational institutions and graduating classes of specialists from these are indices of the training of physicians and other medical cadres.

The range of indices for the development of the network of public health institutions may vary depending on the tasks set for the planned period. Thus, for example, at one time the number of sanitary-epidemiological stations

was planned as an index. However, after sanitary-epidemiological stations were established in sufficient numbers and there was no further increase, the need for planning an increase in these institutions disappeared. On the other hand, indices may appear in the plan which reflect the basic indices for the development of the network of public health institutions, listed above, in more detail. For example, in the list of network indices laid down by Gosplan USSR for the union republics and ministries and departments of the USSR, the plan for 1958 included in addition to the basic indices the following more detailed ones: hospital beds, places in nurseries and the number of positions for physicians in the medical-sanitary network, listed according to city and villages; hospital beds listed according to psychoneurological, tubercular, obstetric and pediatric (including infectious diseases) categories; places in sanatoria including tuberculosis and year-round sanatoria, etc.... This is explained not only by the need for differentiated planning aimed at expanding the network of public health institutions in cities and rural areas and in various specialties, but also by the fact that these indices form the basis for calculating budgeted assignments and for the labor plan.

Long-range plans are worked out only for the most important indices. For example, the list of indices for the network of public health institutions established for the long-range plan for the development of the economy of the USSR for 1959-1965 includes: the number of hospital beds and the number of places in nurseries, broken down according to city and villages, as well as psychoneurology beds and the number of places on the day of maximum use in sanatoria and rest homes, excluding year-round institutions. Also of great importance in the correct working out of the plan are tables of the forms of the plan and the way they are filled in. The tables of plan forms include all indices established for a planned period, including those which have been confirmed and the estimated ones. The plan forms not only list the planned tasks for each index for the planned period but also reflect current figures on plan fulfillment or the expected plan fulfillment for the preceding planned period or year. In the appendix to this work the basic forms of the public health plan according to which the councils of ministers of the union republics and the ministries and departments of the USSR worked out the plans for 1959-1965 are given as an example in a somewhat abbreviated form.

In filling in plan forms it is necessary to pay attention to the precise definition of the expected plan fulfillment for the period preceding the planned period. For

example, the expected plan fulfillment for the development of the network of public health institutions (see Appendix 1) for 1957, in working out the plan for the gross production of the medical industry and capital construction must be based, in addition to statistical reports, on figures of calculation of operation. At the stage of making the plan, the expected fulfillment is, as a rule, defined more precisely. To the draft plan the councils of ministers of the union republic ministries and departments append the basic data used for planning with the necessary calculations showing the planned changes in supplying the population with the most important kinds of medical science.

The order of planning and confirmation of the indices for the development of a network of public health institutions is laid down by the decree of the Council of Ministers USSR of 4 May 1955, according to which the right to determine and approve network indices for public health care is given to the councils of ministers of the union republics. According to the decree of the Council of Ministers USSR of 2 July 1956 the planning of tasks of labor and the establishment of the volume of capital investments for public health ministers of the union republics is assigned to the jurisdiction of the councils of ministers of the union republics in the interests of further heightening the responsibility of the union republics in the administration of public health services.

The Central Committee of the CPSU and the Council of Ministers USSR, by a decree of 4 May 1955, established a new order of planning the economy of the USSR with the aim of improving the planning system and of bringing it into accord with the new forms of management of industry and construction.

From 1959 planning of the economy must be based on long-range plans, with the tasks distributed according to years, separate sectors, union republics, economic administrative rayons and enterprises and construction projects. The plans must be set up by enterprises, construction projects, sovnarkhozes, local soviets, ministries and departments, based on the control figures of the long-range plans for five to seven years, worked out by the Gosplan USSR with the participation of the Gosplan of the union republics and ministries and departments of the USSR and approved by the CC CPSU and the Council of Ministers USSR.

Enterprises, construction projects, sovnarkhozes, union republics and ministries (departments) of the USSR, in working out the plan for the coming year, must accept the tasks of the long-range plan as the basis while making the necessary corrections in them.

The long-range plans must provide for rapid rates and

correct proportions in the development of the economy, for the preferred development of the production of the means of production, the wide-spread introduction of the achievements of science and technology, the development of specialization and cooperation, raising the productivity of labor and lowering the costs of production, as well as effecting the continual rise in the living standard of the workers.

The established practice of planning capital construction will be radically changed--the volume of capital investments and construction-assembly work on construction projects must be determined for the entire period of construction and must be financed and supplied with labor and material resources in full accordance with the established norms and time spans for construction.

The system of approving the plans is also changed. After enterprises and construction projects have worked out long-range plans, based on the control figures, these are approved by the sovnarkhozes, after which they are put into effect. Similarly the ministries (departments) of the USSR and the union republics and local soviets examine the plans of the enterprises, construction projects and institutions in their jurisdiction and work out long-range plans for the ministry (department), oblast, kray or autonomous republic.

The councils of ministers of the union republics ascertain whether the long-range plans worked out by the sovnarkhozes, ministries (departments) of the republic and local soviets are in accord with the established control figures, and approve summary long-range plans for the development of the economy of the given union republic. The Gosplan USSR checks on whether the long-range plans for the development of the economy of the union republics and the ministries and departments of the USSR are in accord with the approved control figures, sets up a summary long-range plan for the development of the economy of the USSR as a whole and submits it for approval to the CC CPSU and the Council of Ministers USSR. At the same time the Gosplan USSR submits for the approval of the CC CPSU and the Council of Ministers USSR the title list of especially important construction projects with a note on the dates when they will be put into operation.

A new system is also established for working out and approving plans for the annual material-technical supply for sovnarkhozes, ministries and departments of the republic, local soviets and for enterprises and construction projects under their jurisdiction. It has been considered necessary to reduce considerably the list of indices of control figures and indices of the economic plan of the USSR as well as indices in the plans approved by the councils of ministers of the union republics.

In accordance with the enumerated decrees on the new system of planning the development of the economy of the USSR, the entire system of planning national public health care is also to be changed. The established system of planning from below permits planning organs and organs of public health to attract a wider group of scientists, specialists and representatives of the public into the working-out of the plans. The working out of long-range plans as the basis of planning makes it possible to plan more effectively the development of the network of public health institutions, to provide them with buildings, and to use the available material and financial resources for effectively improving the people's medical services on the part of the State. Of especially great significance for the construction of public health institutions is the establishment of a new system of planning capital construction. Serious shortcomings in the construction of public health institutions--dispersion of means, long periods of construction, large number of unfinished buildings, insufficient supply of construction projects with building materials and mechanisms, incomplete fulfillment of plans by some executive committees and sovnarkhozes--should be completely abolished under the new system of planning.

Planning organs and public health organs must improve the indices of the plans for the development of public health care, keeping in mind that indices must be retained in the plans, which reflect the most important tasks for the further development of public health services.

Under the new conditions of the reorganization of the planning of the economy of the USSR, the role of all workers in planning organs and organs of public health in the improvement of planning public health services will be considerably increased. They must ensure, in the process of working out the plans, the complex development of all sectors and sections of the economy connected with medical services for the population.



### 3. Planning Hospital--Polyclinic Services

#### A. The Hospital Network

The working out of the plan for the development of the network of hospitals is based on the figures gained by studying the needs of the population for hospital services. The ratio of the necessary number of hospital beds to each 1,000 or 10,000 inhabitants has been accepted as a measure of the need for hospital services. In order to estimate correctly the need of the population for hospital services, it is necessary to have the following figures:

- 1) The number of people turning to ambulatory-polyclinic institutions for medical help;
- 2) the number of patients in need of hospitalization;
- 3) the average annual length of service of a hospital bed;
- 4) the average number of days a patient spends in a bed.

The number of people going to ambulatory-polyclinic institutions for medical help reflects the incidence of sickness among the population in a given city or rayon and is the main basic index for estimating the need of the population for hospital aid. The study of statistical figures shows that any given person goes to an ambulatory-polyclinic institution about once every year (one illness). If figures on visits to polyclinics are available, it becomes possible to begin determining the need of the population for hospitalization, which, according to the data of a number of research works vacillates from 17 to 19 percent of the number of visits to the polyclinics or of the number of inhabitants.

In the determination of the need for hospital services, a substantial part is also played by data on the average period of utilization of a hospital bed in a year and the average number of days which a patient spends in a bed. According to the norms established by the Ministry of Health USSR, a hospital bed should be used for 340 days a year in the cities and 300 days in rural areas. However, in fact, in many cases a hospital bed is used less than that, which points either to a surplus of hospital beds in a given rayon city or oblast or to bad organization of the utilization of the existing hospital network.

With a well-developed hospital network and the existence of a sufficient number of beds for all specialties the average length of time which a patient spends in a bed is about 19 days. In fact, however, this period is subject to great vacillation. It is reduced by simultaneous hospital-

ization and diagnostic research, the use of effective treatment and drugs for serving the patient, improvement of the organization of care for patients, special diet and other measures. In estimating the needs for hospital services, the above-mentioned reserves must be taken into account. If the basic figures enumerated above are available, it is possible to determine the need for hospital services.

The methodology of estimating the number of beds needed for every thousand inhabitants of city population can be shown in the following example. Let us assume that we know the following figures: the needs of the population for hospitalization--18%; the average number of days a patient spends in a bed--19 days; the number of days of utilization of a bed in a year--340; the number of inhabitants in the given rayon--1,000. To determine the need of the population for hospitalization the number of inhabitants (1,000) must be multiplied by the percentage of those needing hospitalization (18) and divided by 100. It will thus be determined that 180 out of 1,000 inhabitants needs hospitalization ( $\frac{100 \times 18}{100} = 180$ ). Taking into account the

average period which a patient spends in a bed--19 days--the above-mentioned 180 people who need hospitalization must spend 3,420 days in the hospital ( $180 \times 19 = 3,420$ ). By dividing the total number of days which the patients spend in bed by the number of days during which a bed is used during a year ( $3,420:340$ ) we obtain the number of beds needed--10.06 for every 1,000 inhabitants--the number we were seeking to obtain. Thus, if the need for hospital services of the population is to be satisfied while the hospital network is exploited in accordance with existing norms (the number of days of use of a hospital bed, the average length of time which a patient spends in bed), about 10 hospital beds are needed for every thousand inhabitants. The trustworthiness of this average norm is confirmed by practice.

Based on the above-mentioned methodological assumptions and the study of factual data on the incidence of illness and hospitalization in the population, with a view to using the development of the hospital network in planning, the Ministry of Health USSR established the average norm of the need for hospital services of the city population--10 beds per thousand inhabitants (order of the Ministry of Health USSR of 21 November 1949).

The following average norms of existing needs serve for planning specialized hospital services; they are calculated by the same method as the general norm of needs for hospital services for the city population:

therapy	2	beds
pediatrics	0.95	beds
surgery	1.9	beds
obstetrics	1.2	beds
gynecology	0.6	beds
ophthalmology	0.25	beds
otolaryngology	0.15	beds
neuropathology	0.2	beds
phthisiology	1.05	beds
dermato-venereology	0.4	beds
infectious diseases	<u>1.3</u>	beds
total	10	beds

Taking into account all growing cultural needs of the population and the need for expanding the specialized types of medical services, an increased norm of the need for hospital beds was established for a long-range planning of hospital services in cities--11.2 beds per thousand inhabitants (order of the Ministry of Health USSR of 29 October 1954). The norms of the need for hospital beds in special fields will be:

therapy	2.2	beds
pediatrics	1.2	beds
obstetrics	1.2	beds
gynecology	0.8	beds
surgery	1.9	beds
neuropathology	0.3	beds
phthisiology	1.2	beds
dermato-venereology	0.4	beds
ophthalmology	0.35	beds
otolaryngology	0.25	beds
infectious diseases	<u>1.4</u>	beds
total	11.2	beds

Using the above-mentioned average norms, it is possible to calculate the needs of the city population for hospital services on a rayon, city, oblast and republic scale. It is possible to cite an example of calculating the needs for hospital beds for a city of 200,000 inhabitants. The total need for hospital beds for a city of 200,000 inhabitants is 2,000 beds (calculating 10 beds per thousand inhabitants). In the interests of bringing hospital services closer to the population, it is expedient to distribute the hospital network among rayons of services, each rayon having a population of 40 to 50 thousand people; at the same

time, the rayons of medical service should as far as possible coincide with administrative subdivisions. For a service rayon with 50,000 inhabitants the following institutions are needed first of all: a rayon hospital, a children's hospital, an obstetric clinic and an anti-tuberculosis dispensary.

Using the norms of needs it is possible to establish that for the population of a rayon of 50,000 people there are needed: a children's hospital of 50 to 75 beds (depending on the category), an obstetric clinic of 80-100 beds, an anti-tuberculosis dispensary of 50 beds, a rayon hospital of about 250 beds (100 therapeutic, 75 surgical and 75 infectious). A part of the narrowly specialized beds (oncological; eye, ear, nose and throat; skin-venereological; neurological; etc.) necessary for the population of city rayons must be established in institutions of all-city scope. In a city hospital, in the oncological, skin-venereological, psychoneurological dispensaries in a city of 200,000 inhabitants there must be about 300-350 narrowly specialized beds.

The distribution of the hospital network in a city of 200,000 inhabitants divided into rayons of 40-50 thousand inhabitants, which was described in the above example, is expedient, but it can be modified according to local conditions. Thus, for example, it is possible, instead of organizing anti-tuberculosis dispensaries in every rayon of the city, to organize an all-city anti-tuberculosis hospital of 150-200 beds. It is possible to organize one large hospital for infectious diseases in the city. Finally, it is not absolutely necessary to establish rayon hospitals in every city, for it is possible to organize two or three larger all-city hospitals instead. The distribution of hospitals and the determination of the classification of the number of beds according to specialties must take place in accordance with local conditions, taking into consideration the geographic distribution of city rayons, the density and composition of the population, the industrial significance of the rayon, and incidence of illness, the actual distribution of existing hospitals, the availability of buildings, etc.

Constant attention must be paid to the development of the network of hospitals in cities, industrial centers, and workers' settlements.

Tasks of the development of public health services in rural areas consist of the further expansion of the network of rayon hospitals as the main basis for giving specialized medical aid to the rural population; organization of specialized hospitals (tubercular, childrens', infectious diseases, etc.); strengthening rural physicians' divisions

by creating new clinics and expanding the network of fel'dsher-obstetric clinics as much as necessary. The planning of hospital services in a rural locality is based on facts obtained by the study of its needs, taking into account demographic indices, the incidence of illness, geographic peculiarities and changes in the economy of the rayon.

As yet no scientifically worked out norms of the needs for hospital services in a rural locality exist. For orientation purposes, the norm can be considered to be about six hospital beds for every thousand inhabitants. The above-mentioned norm based on practical experience is made up of: two beds for in-patients in physician's divisions; two beds for the organization of a rayon hospital and two beds for the organization of medical services for the population in oblast and city hospitals.

In accordance with the norms cited, in a rural rayon with a population of 50,000, the total need is defined at about 300 hospital beds, including 100 beds which will be assigned to the rayon hospital, about 100 beds for in-patients of physicians' divisions, based on the need for having 15-25 beds for every physician's division with a population of 10-15,000. The remaining 100 beds must be distributed in oblast and city hospitals for service to the rural population.

The journal "Sovetskoye Zdravookhraneniye" (Soviet Public Health, No. 2, 1957, published a study by L. G. Lekarev and others, according to which, for the complete satisfaction of the needs of the rural population for hospital services in the two rural rayons investigated by the authors, it is necessary to have seven hospital beds for every thousand inhabitants, not counting the beds in the oblast hospital. However, these data, to be convincing, must be succeeded by an investigation of material from a number of other rayons.

Fel'dsher and fel'dsher-obstetric clinics are established on the basis of the need to have one obstetric clinic for 1,700 inhabitants of a rural area.

The norms which were established for medical service for workers and their families in timber-felling and floating enterprises, repair-technical and machine-tractor stations, as well as in sovnarkhozes in virgin and fallow lands, are somewhat higher. For workers in the timber-felling industry the following norms for medical service have been established: a fel'dsher-obstetric clinic with two workers for every 300-800 persons, a divisional hospital of 25-35 beds for every two to five thousand persons and a divisional hospital of 35-50 beds for every five to 10 thousand persons.

In sovnarkhozes repair-technical and machine-tractor stations in rayons of the virgin and fallow lands, with a population of 800 and more, hospitals of 10-25 beds each are established. In accordance with these norms, about 400 hospitals were organized in the Kazakh SSR in 1954-1956 in regions of virgin or fallow land reclamation.

The plan for the development of hospital services must also take into account the indices of the development of a network of psychiatric hospitals. The psychiatric services must be considerably improved. The need for psychiatric aid is for about 1.5-2 beds for every thousand inhabitants. In actual fact, at the end of 1957, 0.7 beds for every thousand inhabitants was available for this type of service.

Taking into account the difficulties in the hospitalization of psychiatric patients and the overloading of existing psychiatric hospitals, in accordance with government directives, the Ministry of Health USSR and the councils of ministers of the union republics must build and put into operation in 1955-60, psychiatric hospitals having 15.2 thousand beds and 58 psychoneurological dispensaries of 5.8 thousand beds while putting into use a total of 22,000 beds. The planning organs must keep in mind the need for the expansion of a network of psychiatric hospitals and the construction of these institutions in quantities sufficient to fulfill the need for them.

One of the most important tasks of planning the development of the network of hospitals is their correct distribution, the abolition of the lack of this kind of service in some oblasts and republics. The unequal development of the network of public health institutions in oblasts and republics of the Russian Federation was pointed out by the Ministry of Health RSFSR, Comrade S. V. Kurashov ("Sovetskoye Zdravookhraneniye", No. 3, 1957). According to Comrade Kurashov's data, indices of medical services in some oblasts and autonomous republics of the Russian Federation lag considerably behind the indices in other oblasts and autonomous republics and do not at all correspond to the level of economic and cultural construction carried on in them. For example, if at the beginning of the Sixth Five-Year Plan, in the RSFSR as a whole, an average of 68 hospital beds and 16 doctors were available per 10,000 inhabitants, in the Bashkir ASSR only 48 hospital beds and nine doctors were available for the same number of inhabitants, while in the Northern-Osetian ASSR there were 69 beds and 22 doctors. The Altayskiy Kray lagged behind considerably in indices of the development of public health services, regardless of the considerable development in this kray of industry, agriculture and especially of reclamation of virgin and fallow lands.

In the Altay kray the number of beds is two-thirds and the number of physicians one-half of the average number in the republic.

The following facts for 1957 on the level of hospital services for the population of the union republics also characterize the backwardness of a number of republics:

The number of hospital beds per thousand inhabitants in the union republics in 1957

Total in the USSR	7.0	Azerbaydzhan SSR	6.4
including		Lithuanian SSR	6.8
RSFSR	7.3	Moldavian SSR	6.2
Ukraine SSR	6.8	Latvian SSR	9.6
Belorussian SSR	5.7	Kirghiz SSR	5.7
Uzbek SSR	5.8	Tadzhik SSR	5.7
Kazakh SSR	7.4	Armenian SSR	6.2
Georgian SSR	6.5	Turkmen SSR	7.8
		Estonian SSR	9.0

In the Belorussian, Uzbek, Moldavian, Kirghiz, Tadzhik and Armenian union republics the indices of available hospital services lag behind the average union indices. In connection with this, in the above-mentioned union republics, in calculations for the Sixth Five-Year Plan a considerably greater increase in the hospital network was noticeable than in the other republics. If it was planned to increase the number of hospital beds in the USSR as a whole in 1960 by 28 percent as compared with 1955, the increase in the Belorussian SSR will amount to 38.6 percent in the Uzbek SSR--30.8, in the Moldavian SSR--39.2, in the Kirghiz SSR--46.2, in the Tadzhik SSR--33.7 and the Armenian SSR--37.6%. The planned rates of growth of the network of hospitals will make it possible in 1960 to raise the index of hospital services available to the population to 6.9 hospital beds per thousand inhabitants in the Belorussian SSR, 6.7 in the Uzbek SSR, 7.4 in the Moldavian SSR, 6.5 in the Kirghiz SSR and 7.1 in the Armenian SSR.

A more rapid rate of growth of the hospital network is also planned in the above-mentioned union republics for the 1959-1965 period.

#### B. The Network of Ambulatory-Polyclinic Institutions.

The correct planning of the network of ambulatory-polyclinic institutions is very important, since these institutions supply the medical services on a mass basis. In accordance with data of 1955, there were 33,050 medical

institutions in the USSR which offered ambulatory-polyclinic service in all specialties; this figure included 16,094 in the cities and 16,956 in rural areas.

The polyclinics and outpatient clinics form part of the hospitals and the departments; children's consultations form part of the children's hospitals, gynecological consultations part of obstetric clinics, rural out-patient departments part of divisional hospitals, etc. In addition, a considerable part of the above-mentioned institutions exist independently. There are 4,159 ambulatory-polyclinics which are not part of a hospital, and 6,037 medical clinics.

Dispensaries--tubercular, skin-venereological, psycho-neurological and others -- are complex institutions, which include in-patient and polyclinic institutions. There are 2,208 dispensaries of all kinds in the country.

Planning of the development of ambulatory-polyclinic services is based on the norms of the needs of the population for this type of medical service. The above-mentioned norms are expressed in the number of visits to ambulatory-polyclinics by one person in one year.

So as to determine more correctly the norms of the need for ambulatory polyclinic services, it is necessary to base them on data on the incidence of illness among the population. To obtain a norm, it is necessary to have figures on initial visits to ambulatory-polyclinic institutions which reflect data on the incidence of illness, and to add to them the number of repeated visits and those connected with the prevention of illness among the population. By such a calculation the need of the population for ambulatory-polyclinic institutions estimated per person per year will be taken into account with a certain amount of accuracy.

The Ministry of Health USSR defines the need of the city populations for ambulatory-polyclinic services at nine to 10 visits per person per year (order of the Ministry of Health USSR of 21 November 1949) with the following approximate distribution according to specialty:



therapy	1.9-2.0
surgery	1.4-1.5
pediatrics	1.1-1.2
obstetrics gynecology	0.8-0.9
ophthalmology	0.4-0.5
otolaryngology	0.3-0.4
psychoneurology	0.3-0.4
phthisiatrics	0.6-0.7
dermato-venereology	0.6-0.7
stomatology	1.6-1.7
(dental surgery)	

Total	9.0-10.0
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The norms cited above can be applied only for estimating the need for specialized types of medical services for large cities (in cities of a republic, oblast or kray). For some cities and their rayons it is recommended to use the above-mentioned norms of the number of visits per person per year only if existing characteristics in the incidence of illness among the population are taken into account and the necessary corrections are made.

The number of positions for physicians in ambulatory-polyclinic institutions is an index of the plan for this type of service. The methodology of calculating this index can be illustrated by the following example. Let us assume that in a rayon of a city with 50,000 inhabitants it is necessary to determine the needed number of positions of interns for therapeutic service for the population. To solve this task, we must have the following data: determine the norm of the needs of the population for ambulatory-polyclinic services, expressed by the number of visits per inhabitant per year; the need for the population for therapeutic services per year and the yearly work load of every therapeutic physician. Let us assume that the norm of the need of the population for ambulatory-polyclinic services in therapy for a given rayon amounts to 1.8 visits per inhabitant per year. The need of the population for therapeutic services in the case amounts to 50,000 inhabitants 1.8 vitis - 90,000 visits a year. The work load for one post of a therapeutic physician in a combined hospital and polyclinic, in the polyclinic receiving offices amounts to 3,400 visits a year. Thus, for satisfying the needs of 50,000 inhabitants for ambulatory-polyclinic services 27 physicians-therapists are needed (90,000:3,400). Thence the relative number of posts for physicians will be approximately 0.5 posts per thousand inhabitants, or two therapists for a medical division of 4,000 inhabitants. By this same method it is possible to calculate the number of

physicians needed for every type of specialized ambulatory-polyclinic service and for any number of city inhabitants.

The number of medical posts in ambulatory-polyclinic institutions is determined in accordance with the following norms per 10,000 city inhabitants (order of the Ministry of Health USSR 29 October 1954):

therapy	3.75
pediatrics	2.5
obstetrics and gynecology	1.25
surgery	1.25
neurology	0.5
phthisiatrics	1.25
dermato-venereology	0.6
ophthalmology	0.6
otolaryngology	0.5
stomatology (dental surgery)	<u>3.5</u>

Total 15.7

The number of medical posts for interns are calculated according to the norms cited above; this does not include the positions of directors of departments, chief physicians and physicians in auxiliary departments (X-ray, physical therapy, laboratories).

#### 4. Planning the Network of Nurseries

The successful development of socialist construction in the USSR was accompanied by increasing enrollment of women in industrial and public activities. While in 1929 the total number of women working in the economy was 2.5 million, or 27 percent of the total number of workers and employes, in 1957 the number of working women in the economy exceeded 24 million and reached 46 percent of the total number of workers and employes. In connection with this the Party and the government always devoted much attention to the protection of mother and child. An example of this is the widespread development in the USSR of a network of nurseries and of the construction of these institutions. In 1913 in Russia there was a total of 550 places in permanent nurseries, while there were none at all in rural areas. On 29 July 1927 the Council of People's Commissars RSFSR ordered the use of five to 10 percent of the fund for improvement of the daily life of workers and employes for the maintenance of nurseries, so as to ensure the material base of the construction and supply of nurseries. Economic organs and enterprises were asked to contribute to the expense of building and maintaining nurseries.

In 1932 the VTsIK /All-Union Central Executive Committee/ and the SNK (Council of People's Commissars) adopted an important decree: "On Nurseries for Children in Cities, Industrial Centers, Sovnarkhozes, MTS and Kolkhozes," which served as a program for general construction of nurseries for a number of years. As a result of these measures at the end of the First Five-Year Plan the number of places in permanent nurseries reached 600.2 thousand as against 62.1 thousand in 1928. The network of nurseries was particularly developed in rural areas. The number of places in permanent nurseries in rural areas in 1932 was 257.1 thousand, as against 8.3 thousand in 1928. In the following years the number of places in nurseries increased continually and by 1957, it had reached 1,046 thousand.

The plan for the development of permanent nurseries had to be based on figures of the need of the population for nurseries. The need for nurseries in cities, workers' settlements' enterprises, and in rural rayons depends on the level of development of the economy and production, the number of children under the age of three, the employment of women in production and on other causes, including living conditions (the conditions of living quarters, the existence of members of the family who do not work and can care for the children). Planning organs, in calculating the need for nurseries, must take into account to some extent

the above-mentioned circumstances, especially in working out drafts for long-range plans for the development of the network of nurseries. Norms obtained by scientific research and practical experience serve as a starting point in determining the needs for permanent nurseries. The Ministry of Health USSR recommends the following sample norms for the need for nurseries for long-range planning for the coming seven years: in cities and workers' settlements--6.8 places per 100 working women, or 24 places per 100 children below the age of three; for rural areas about 7.7 places per 100 children under the age of three.

The above-mentioned norms for the need for nurseries in cities and workers' settlements are average for women working in various sectors of industry and in State institutions. However, in large enterprises with a considerable number of working women, as well as in such sectors of industry as the textile and food industries and some others, where women predominate in the working force, the norms for the need for nurseries are considerably higher.

All ministries and departments must carry on construction of nurseries in all enterprises which employ 500 women or more, calculating 12 places per 100 working women; this should serve 75 percent of the children of nursery age.

Research carried on in 1945, 1946, and 1947 by scientific co-worker of the Institute of Pediatrics of the Academy of Medical Sciences USSR, S. S. Yerman, showed that the need for nurseries in the textile industry is for 66-75 places, and in the food industry for 71 places per 100 working women who have children below the age of three.

The recommended norms for the need for nurseries are meant for orientation purposes and thus must be applied by planning organs with certain corrections, taking into account concrete local conditions and calculated figures. For example, it must be taken into account that, according to the existing decree, children are admitted to nurseries from the age of two months to three years. Decrees adopted in recent years by the Council of Ministers USSR on granting additional privileges to mothers (longer vacations before and after delivery, the right to a vacation without pay in the period after childbirth) must also be noted as, in connection with the above-mentioned privileges, mothers find it possible to care for the child in the home in the first months of its life and, consequently, the need for nurseries will be reduced. It must also be taken into account that about 25 percent of children of nursery age from two months to three years do not need nurseries and are cared for at home.

For determining the need for nurseries on an enterprise, rayon, city, oblast or republic scale, in addition to norms, it is also necessary to have the following basic data:

- 1) the expected number of places in permanent nurseries maintained by the State budget at the beginning of the planning period;
- 2) the exact number of working women at the beginning of the planning period according to figures of statistical reports and the proposed increase or reduction in the number of working women according to figures of the planning organs for the entire planned period, broken down according to years;
- 3) the number of children below the age of three. The total number of children below the age of three is determined approximately, based on the estimate that seven percent of the total city population and nine percent of that in rural areas is made up of children of this age. In order to determine the total number of children below the age of three more exactly, calculations must be made for each of the three years preceding the planning period. For this purpose the number of children who have died is subtracted from the total number of children born in each year. By putting together the calculated figures for three years, it is possible to determine the approximate number of children below the age of three;
- 4) the number of children below the age of three with working mothers. To determine the number of such children in individual enterprises, either the working women are polled or the corresponding documents of the enterprise are studied. In determining the number of children of working mothers on a city, oblast, republic or sector scale, it is possible to use the coefficient of the number of children which, according to the data of several investigations, is 90 children under the age of three per thousand working mothers. The coefficient of the number of children depends on the birth-rate and a number of local conditions; in this connection it must be applied with the necessary corrections.

With the norms of the need for nurseries and with all the basic data enumerated above, it is possible to determine the actual need for nurseries and to map out in accordance with them more or less correct plans for the development of the network of these institutions in the planning period. Determination of the need for nurseries and the necessary increase in the network for the planned period is still insufficient for completing work on the draft plan. It is necessary that the draft economic plan provide for ensuring

the planned scale of growth of the network of nurseries by construction of buildings for these institutions, training the necessary number of doctors and secondary medical workers, and material-technical supply as well as by providing for the necessary financial means for the maintenance of the planned network of nurseries.

The scale of construction provided for in the economic plan and of the completion of nurseries must correspond fully to the planned increase in the number of places in nurseries, and it should exceed it in a number of cases in order to improve the sanitary-hygienic norms of maintenance in the existing network of nurseries.

Tasks for the construction of buildings for nurseries, supplying them with necessary equipment medical cadres, and financing must be coordinated with the task of improving the quality of these institutions.

For example, it is necessary to construct larger buildings for nurseries (in cities for 100-120 places, in the country for 60-80-100 places) where organizations of differentiated services according to age is possible (for infants, toddlers, and other children), as well as the organization of 24-hour and sanatorium groups, isolation rooms for sick children, etc. According to the figures of the Ministry of Health USSR, it is expedient to expand the organization of groups in nurseries and entire nurseries on a 24-hour or sanatorium basis. The extent of the tasks for the development of such nurseries is of course determined while taking into account material and financial possibilities.

Planning the development of a network of nurseries must be guided by a decree of the Council of Ministers USSR of 13 October 1956: "On Further Measures to Aid Mothers Working in Enterprises on Offices." This resolution of the government admits the expediency of transferring control of nurseries from public health organs to industrial enterprises of ministries and departments, as well as combining, wherever possible, nurseries and kindergartens into a single institution. The Ministry of Health USSR was ordered to work out a model plan of a building for a single institution for children of preschool age. Realization of the above-mentioned measures aims at improving the care of children of preschool age and creating more favorable conditions for working mothers.

It is necessary to expand by all possible means the network of permanent nurseries which are built and maintained on kolkhoz funds. In order to lighten the toil of women kolkhoz members in the period of sowing and harvesting work in kolkhozes, a large network of seasonal nurseries

is established each year. The Council of Ministers USSR ordered the councils of ministers of the autonomous republics and kray and oblast executive committees each year to examine and approve plans for the organization of nurseries and children's play groups in kolkhozes for the peak period of agricultural work. As a result of this, the number of places in permanent nurseries in kolkhozes in 1956 reached 46.1 thousand, while seasonal nurseries correspondingly had 2.38 million places. However, it must be taken into account that the development of the network of kolkhoz nurseries has not yet reached the prewar level. In 1941, a total of 111 thousand places were established in permanent kolkhoz nurseries, while seasonal nurseries had 4 million places. The problem is to promote by all possible means the expansion of kolkhoz nurseries, permanent as well as seasonal. Although tasks for the development of a network of permanent nurseries in kolkhozes are not included in the State economic plans, the councils of ministers of the union republics and planning organs can give substantial help to kolkhozes in this matter, for example by assigning to them scarce building materials for building kolkhoz nurseries.

## 5. Planning the Development of the Network of Sanatoria and Rest Homes

For the successful development of a network of sanatoria and rest homes and their improvement, the State plans for the development of the economy provide for a wide range of measures. These plan assignments include: well-documented tasks for the development of a network of health resorts, sanatoria and rest homes for the planned period; construction of buildings for these institutions on the necessary scale; expansion and building of polyclinics, mud bath, bath buildings, buildings for drinking medicinal waters, dietary dining rooms, clubs, boarding houses and other general health resort buildings; providing amenities and technical supplies for them; supplying medical cadres for them.

Plans for the construction and development of a health resort network must also be coordinated with measures for geological investigations, which aim at studying the reserves of balneological-mud sources in existing health resorts and which also attempt to locate new deposits of medicinal waters and muds.

In addition, measures must be provided for the development of sovnarkhozes and auxiliary farms in the vicinity of health resorts, sanatoria and rest homes, in order to supply patients and vacationers uninterruptedly with meat, vegetables, and dairy products.

The development of the network of sanatoria and rest homes is characterized by the following figures as opposed to the prewar period:

### Development of the network of sanatoria and rest homes:

	1939	1950	1955
Number of sanatoria	1,828	2,070	2,178
Number of places in them	239,000	255,000	284,000
Number of rest homes	1,270	891	939
Number of places in them	195,000	128,000	160,000

In comparison with the prewar period the network of sanatoria grew by almost 20 percent, while the network of rest homes has not yet reached the prewar level. The data cited for union republics attest to the unequal development of the network of sanatoria and rest homes. The RSFSR has 53 percent of the total number of places in sanatoria in the country, the Ukrainian SSR has 24 percent, while in the remaining republics the network of sanatoria is inadequate.



The network of rest homes in them is also considerably less well developed than in the RSFSR and the Ukrainian SSR. In the RSFSR in turn, more than one-half of the places in sanatoria are situated in the southern and central oblasts and a much smaller part in the rayons of the Urals, Siberia and the Far East.

The distribution of sanatoria and rest homes and of places in them among the union republics in 1955 is shown below.

The network of sanatoria and rest homes among union republics

Union Republics	Number of Sanatoria	Number of places in them	Number of Rest Homes	Number of places in them
RSFSR	1192	153.3	609	106.5
Ukraine SSR	506	69.5	148	25.1
Belorussian SSR	39	4.2	12	2.1
Uzbek SSR	42	6.4	14	2.8
Kazakh SSR	50	7.7	27	3.4
Georgian SSR	104	13.5	39	4.3
Azerbaijan SSR	54	4.0	10	1.8
Lithuanian SSR	30	4.5	10	1.8
Moldavian SSR	6	0.7	3	0.5
Latvian SSR	59	9.1	38	6.8
Kirghiz SSR	11	2.2	4	0.9
Tadzhik SSR	9	1.1	5	0.7
Armenian SSR	21	2.7	8	1.1
Turkmen SSR	14	1.8	7	1.1
Estonian SSR	41	3.3	5	1.1
Total in the USSR	2178	284.0	939	160.0

In the last period the majority of seasonal sanatoria and rest homes were reorganized for year-round work and, as a result, the capacity for admissions of the existing network of sanatoria and rest homes increased, as compared with the prewar period. However, a part of the sanatoria and rest homes continue up to the present time to work only during the summer period, or for four to five months.

For correct and well-worked out planning of the network of sanatoria and rest homes, data on the needs of the workers for such institutions are of primary importance.

As far as the needs of the population for sanatoria-health resort services are concerned, it must be said that

they are far from being completely satisfied. This is attested by a number of investigations and statistical materials. In a work by the Central Institute for Health Resort Affairs of the Ministry of Health USSR: "Sanatoria-health Resort Services Available to the Population of the USSR," compiled in 1954 by scientific co-workers of the Institute, L. G. Gol'dfayl' and M. M. Mazur, materials are cited which support this statement.

The materials cited in the above-mentioned work show that, although 60-70 percent of all sick workers who need sanatorium care were taken care of, in three groups of illnesses (rheumatic heart disease, hypertension, and stomach and duodenal ulcers), which include more than one-half of all patients, about 45 percent of the patients need care, while only about one-half of all those who need it are actually taken care of in sanatoria.

This leads to the conclusion that, side by side with the expansion of general therapeutic sanatoria, it is mainly necessary to expand and increase the capacity of the specialized sanatoria, primarily for patients with stomach and duodenal ailments and diseases of the circulatory organs. There is also a great need for the further considerable development of the network of sanatoria for tubercular patients, in connection with the need of lengthening the period of treatment of patients, of specialized children's and psychoneurological sanatoria, which are extremely inadequate, as well as of mud-cure sanatoria for treatment of people with diseases of the digestive organs or with neurological or gynecological illnesses.

The Ministry of Health USSR, in preliminary calculations for the development of sanatorium-health resort services for the population for 15 years, assumes that in this period the number of places in sanatoria should be increased to 20.3 per thousand inhabitants as against 14.5 in 1956; the number of places in rest homes is to be increased from 719 to 14.1. In accordance with the above-mentioned calculations by the ministry, it will be possible in 1975 to attain the following differentiated norms for providing sanatorium services for the population:

- 40 sanatorium places per 10,000 workers of the leading sectors of industry;
- 20 places per 10,000 workers and employees of other sectors of the economy;
- 15 places per 10,000 children under the age of 14;
- 10 places for 10,000 inhabitants of cities and workers' settlements;
- 3 places per 10,000 rural inhabitants (not counting places in kolkhoz and inter-kolkhoz sanatoria).

For the two latter groups of the population, 10 additional places in tuberculosis sanatoria per 10,000 inhabitants should be added.

The norms of the needs for sanatorium services and rest homes planned by the ministry are realistic and have as yet not encountered any objection; as a result they can be used for orientation for calculating long-range needs for sanatoria and rest homes.

In 1956 all sanatoria and rest homes were transferred from the administration of sector ministries and other departments to that of the ministries of public health of the union republics. At the same time in the course of 1956-1958, the following very important measures were carried out:

- a) unification and enlargement of sanatoria and rest homes adjacent to each other, reduction of parallel treatment, diagnostic laboratories, cabinets and supply organizations with a simultaneous reduction in the number of service personnel;
- b) revision of norms for planning sanatoria and rest homes so as to reduce the costs of construction at the expense of reducing the area of auxiliary premises and building dormitories of the easier type;
- c) working out and approval by the councils of ministers of the union republics of general plans for building the most important health resorts for the future;
- d) carrying out a number of important measures which do not require considerable capital investments, for adapting and reorganizing sanatoria and rest homes for year-round operation, which now only work in the summer period;
- e) increasing the construction of hotels and boarding houses in health resorts;
- f) carrying out measures to set up high capacity building organizations and large bases of supply and auxiliary farms in rayons of large-scale health resort-construction, which would be under the jurisdiction of the councils of ministers of the union republics;
- g) regulating prices for travel permits to sanatoria and rest homes.

The measures enumerated above are aimed at a very rapid expansion by all possible means of the network of sanatoria and rest homes and their capacity, with the least possible expenditure, to create large health centers with qualified medical service and treatment, reduce the cost of travel permits, improve the food for patients and vacationers and create conditions for the long-range development of

large health resorts. Realization of the above-mentioned measures only, for enlarging 146 sanatoria and rest homes and reducing parallel supply organizations and treatment-diagnostic establishments, made it possible in 1956-1957 to make available 3,820 additional sanatorium places without undertaking new construction.

The directives of the 20th Party Congress set concrete tasks in further sanatorium-health resort construction for soviet, Party and economic organs and organs of public health. In accordance with the directives, the development and construction of a network of sanatoria and rest homes must be realized in the coming years primarily in the central and northern rayons of the European part of the USSR and in the rayons of the Urals, Siberia, the Far East, Central Asia and Kazakhstan. Every year considerable capital investments are provided in the economic plans for construction and further expansion of sanatoria and rest homes. A part of the assigned funds is spent on the organization of further amenities in existing sanatoria and rest homes, on building water supply and sewerage systems, polyclinics, mud-treatment institutions, bath houses, dining rooms, clubs and other buildings generally necessary in health resorts. In the period 1958 through 1962 much work is to be done in constructing, reconstructing and providing further amenities in Primorskiy Kray and Chitinskaya Oblast in the health resorts "Lastochka," "Shmakovka" and "Sadgorod," with 1,350 sanatorium beds to be made available in the health resorts "Darasun," "Kuka" and "Olentuy," 700 sanatorium beds are to be made available.

Construction has begun on the large health resorts of "Sanotsvet" in the Urals and "Sinegorsk" in the Sakhalinskaya Oblast.

Construction is continuing in respect to such large health resorts as "Belokurikha" in Altayskiy Kray, "Ust'-Kachka" in Permskaya Oblast, "Kul'duf" in Khabarovskiy Kray, "Talaya" in Magadanskaya Oblast and a number of others.

Considerable funds are assigned for the construction and further development of the health resorts "Boroboe," "Mulyady" and "Chimgan" in the Kasakh SSR, "Dzhalan-Abad" and "Dzheti-Oguz" in the Kirghiz SSR, "Chartak" in the Uzbek SSR and "Obi-Garm" in the Tadzhik SSR.

In addition to carrying out the operations listed above in regions of the Urals, Siberia, the Far East, Kazakh SSR and the Central Asian republics, measures are being undertaken in the central, southern and western regions of the country to expand further the network of sanatoria, to build them and supply further amenities.

Construction and restoration work is being carried

on in respect to health resorts, hospitals, children's institutions and living quarters in the health centers of the Crimea, the "Slavyansk" health resort and other very large health resorts of the Ukrainian SSR. Construction is being completed on sanatoria and bath houses in the "Tskhaltubo" health resort in the Georgian SSR.

In the coming years the territory of the largest health resort, "Sochi-Matsestin", will be considerably enlarged by including in it the Adlerskiy and Lazarevskiy Rayons of Krasnodarskiy Kray. A general plan is to be worked out for the development of the health resort settlement of Lazarevskoye and for enlarging the Sochi-Matsestin health resort by 3,760 beds in 1958-1965 by completing the construction of sanatoria already begun and by construction of new sanatoria buildings of the less complicated type.

Work will also be carried on to provide further amenities for, and to help reconstruct and organize effectively, the mineral-waters and curative-mud-treatment system; polyclinics, mud treatment houses and boarding houses; sanatoria will be built in the health resorts of the Caucasian mineral springs "Nal'chik," Lipets, and others.

Such is the main outlook in the coming years for the development of a network of health resorts, sanatoria and rest homes, and for the improvement of services for workers in these institutions. The most important task in the development of sanatorium-health resort construction is fulfillment of the directives of the Party and the government on the development by all possible means of a network of sanatoria and rest homes in rayons of the Urals, Siberia, the Far East, and the Central Asian republics and on the improvement of the work of sanatoria and rest homes. The successful solution of this task depends in many ways on the planning organs and organs of public health.

## 6. Planning the Labor Force and the Training of Medical Cadres

The plan for labor in public health includes tasks for increasing the number of workers, the wage fund, and the amount of wages paid. It is very important to determine correctly the main index of the labor plan--the number of workers in sanitary-medical institutions. The plan to increase the number of these workers is based on the growth in the network of institutions of public health and on the norms of the service staffs.

Norms for service staffs are established by the Ministry of Health USSR according to the following posts: physicians, secondary medical personnel, younger medical personnel and other economic and service personnel. In determining the plan for the number of workers, it is necessary to take into account the actual number of correspondingly qualified cadres employed in the institutions, the outlook for increasing the number of these cadres, and the possibilities of simplifying the structure and improving the work of institutions of public health. As an example we can cite the actual service staffs of medical institutions in 1955. At that time, according to the report of the TsSU (Central Statistical Administration) USSR, there were in hospitals, nurseries and sanatoria, for every 100 hospital beds (places) a total of medical and service personnel of:

in city and psychoneurological hospitals	143.1
in rural hospitals	134.8
in city nurseries	34.7
in rural nurseries	26.3
in sanatoria	76.4

Calculations of the number of personnel in medical-sanitary institutions is carried on separately for hospitals, nurseries, sanatoria, children's homes, fel'dsher-obstetric clinics and sanitary-epidemiological institutions, as the norms for the staff are different in each of them. Indices of average wages and the wage fund are determined while taking into consideration the rates for various posts and payments for privileges of all kinds.

The development of the network of institutions of public health and the increase in the number of workers must be ensured by training the necessary number of medical cadres. Indices of the plan for training medical cadres are the number of admissions of students to higher and secondary medical educational institutions and the number of graduating

physicians and other specialists with higher and secondary qualifications from these educational institutions.

Admissions to medical higher education institutions and schools, as well as graduation of specialists from them, are based on calculations for the need for medical cadres based on the drafted long-range plan for the development of the network of public health institutions, and for staff norms established for planning posts for physicians and secondary medical personnel, as well as on figures on the number of medical workers who can hold more than one job.

The special calculating index "The number of posts for physicians in medical-sanitary institutions" serves as the basis for estimating the need for cadres of physicians.

The Ministry of Health USSR has established the following average estimated staff norms per 100 hospital beds (places).

#### Estimated staff norms for medical personnel

	physicians	secondary medical personnel
City hospitals	29.0	58.5
Rural hospitals	22.0	59.0
City nurseries	1.0	15.0
Rural nurseries	0.5	10.0
Sanatoria	3.8	13.8

Staff norms for medical personnel with higher or secondary qualifications are also established for sanitary-antiepidemic institutions in cities and rural areas, bureaus of experts in forensic medicine and fel'dsher-obstetric clinics.

The staff norms cited above are of a directive nature and differ from those actually in existence. According to a report by the TsSU USSR for 1955, the number of staff posts for physicians and secondary medical personnel is expressed in the following indices:

#### The number of staff posts per 100 hospital beds (places)

	physicians	secondary medical personnel
City hospitals	27.4	57.0
Rural hospitals	20.5	57.8
City nurseries	1.0	10.9
Rural nurseries	0.4	5.4
Sanatoria	5.5	15.4

It is clear from the figures cited that actual staffs of physicians and secondary medical personnel are somewhat smaller than the norms of the Ministry of Health USSR; this is why, in calculations of the needs for medical cadres, they are used with some corrections with a view to their increase. Knowing the planned increase in the network of public health institutions and estimating the needed number of personnel; it is possible to establish the number of medical cadres with higher and secondary medical qualifications needed for ensuring the development of the network. In calculating the needs for medical cadres, it must be kept in mind that some of the posts for physicians are occupied by persons holding other posts as well. The calculations must also take into account the need for young specialists to replace the decrease in medical workers (of about one to two percent).

In view of the time needed for study in higher and secondary medical educational institutions, calculations of the need for specialists must be carried out for a number of years in advance. Based on these calculations of the long-range need for specialists, the number of students to be admitted to higher and secondary medical educational institutions can be determined. For example, to determine the number of admissions to medical higher educational institutions in 1958, it is necessary to know how many physicians will be needed in 1964, i. e. when the students admitted in 1958 graduate from the higher educational institutions.

To illustrate this fact, we can cite one of the variants of calculating the needs for physicians' cadres in 1956-65 in the country as a whole.

According to the above-mentioned variant of the draft plan, 360,000 new hospital beds, 409.8 thousand places in nurseries and 22.6 thousand places in sanatoria were to be made available in 1956-1960. The number of posts for physicians, estimated according to actual conditions per 100 beds (places), will with some improvement in medical services, come to 496.4 thousand in 1960, as compared to 394.6 thousand in 1955. A gradual reduction is to be achieved in the coefficient of plural job holders from 1.3 in 1955 to 1.2 in 1960. Taking this fact into consideration, the total number of physicians in the country is to reach 409,000 in 1960, as against 310,000 in 1955. The number of graduating physicians in the years of the Sixth Five-Year Plan is predetermined by admissions in previous years, and will amount to 104.3 thousand as against 75.7 thousand graduated in 1951-1956. This number will approximately correspond to the estimated need for cadres of



physicians; as a result, the balance of cadres of physicians is coordinated with the planned growth in the network of public health institutions.

In 1961-1965 it was conditionally planned to expand the network of public health institutions by 300,000 hospital beds, 400,000 places in nurseries, and 30,000 places in sanatoria. If this growth in the network of public health institutions is to be well staffed, it is required that there be an increase in staff physicians to 593 thousand in 1965; if plural job holding is to be further reduced to 1.8 the number of physicians must increase to 502,000 [sic].

If this number of physicians is compared with the number of physicians expected to be available at the end of 1960, it is possible to determine the additional needs for cadres of physicians for 1961-1965, necessary for ensuring the planned increase in the public health network. If the number of physicians needed to replace the annual decrease in the number of working physicians -- about one to two percent of the total -- is added to this requirement, we have determined how many specialists must be graduated from higher medical educational institutions in 1961-1965. Admission figures to higher educational institutions in 1956-1960 must be based on these figures.

Calculations of the needs for secondary medical cadres are made by the same methods as for cadres of physicians.

## 7. Planning Capital Construction for Public Health Services

The planning of capital work (investments) is a very important part of the work on the plan for the development of national public health services. Capital investments must ensure the construction of medical-sanitary and children's institutions on a scale necessary for the development of the network of these institutions provided for in the plan.

The Soviet socialist state, in the interests of the protection of the workers' health provides for construction and supply with equipment on an ever-increasing scale of hospitals, nurseries, sanatoria and other public health institutions, financed by State capital investments, according to the State plan for the development of the economy.

The ministries of health of the union republics, the councils of ministers of each autonomous SSR and the executive committees of local soviets plan and provide for the construction of hospitals with polyclinics of republic, oblast, city and rayon scope, as well as all specialized public health institutions, sanatoria and rest homes, medical educational institutions and scientific-research institutes.

In the postwar period, in order to improve medical services for workers and members of their families, large-scale construction of hospitals and nurseries was undertaken, financed by industrial funds of the industry.

The reorganization of the administration of industry and construction and the granting of broad rights to councils of ministers of union republics, autonomous SSR's, executive committees of local soviets and economic soviets of economic administrative rayons, makes it possible to utilize more effectively the money assignments, material resources and construction organization for ensuring the construction of social-cultural projects, including hospitals, nurseries, and other public health institutions.

The decree of the Council of Ministers USSR of 30 May 1958 decided that, beginning in 1959, capital investments for construction of living quarters, communal and cultural buildings, and public health projects would be planned apart from capital investments for construction of production projects; this emphasized the independent significance of such construction and increased the responsibility for fulfilling the plans for it.

Capital investments for construction of living quarters and communal and cultural buildings and public health projects in the economic plan are approved by the councils

of ministers of the union republics and by the following shortened list of union ministries and departments:

Ministry of Communication  
Ministry of Transport Construction  
Ministry of the Maritime Fleet  
Ministry of Transport USSR (for linear construction)  
Ministry of Electric Power Station Construction (for workers employed in building hydroelectric and atomic power stations)

Ministry of Defense USSR  
Ministry of Medium Machine Building  
Ministry of Internal Affairs USSR  
Ministry of Higher Education USSR (for construction of student dormitories)

State Committee of the Council of Ministers USSR (for aviation techniques)

State Committee of the Council of Ministers USSR (for defense techniques)

State Committee of the Council of Ministers USSR (for radioelectronics)

State Committee of the Council of Ministers USSR (for shipbuilding)

Committee of State Security attached to the Council of Ministers USSR

Main Administration of the Gas Industry attached to the Council of Ministers USSR (for linear construction)

Main Administration for the Construction of Automobile Roads attached to the Council of Ministers USSR (for linear construction)

Main Administration of the Civil Air Fleet attached to the Council of Ministers USSR (for construction on airports)

Academy of Sciences USSR and Glavgolodnostepstroy.

The system of distributing capital investments for construction of living quarters, communal and cultural buildings and public health projects among the councils of ministers of autonomous republics, executive committees of kray, oblast and city soviets, sovnarkhozes, ministries and departments of the republics, as well as among enterprises and organizations of ministries and departments of the USSR, which do not approve capital investments for the above-mentioned purposes in the economic plans, is established by the councils of ministries of the union republics and the corresponding ministries and departments of the USSR.

A list of projects which are included in the plans for the construction of public health institutions was com-

piled. According to this list, the plans for the construction of public health projects include:

hospitals, obstetric clinics, clinics for ambulatory patients, polyclinics, dispensaries and leper hospitals;

sanatoria, rest homes, nurseries, stadia, houses for invalids and the aged, sports areas, sports halls, pioneer camps, etc.;

sanitary-epidemiological stations, blood transfusion stations, medical, hospital and pharmaceutical warehouses and pharmacies;

medical higher and secondary educational institutions, scientific-research institutes and special institutes.

From capital investments, assigned to public health as a whole, it is planned to invest capital for the construction of enterprises of the medical and prosthetic appliances industries.

Thus, under the new conditions, the role and responsibility for planning capital investments for the construction of living quarters, communal and cultural buildings and projects of public health of the councils of ministers of the union republics, the councils of ministers of the autonomous SSR, the executive committees of the local soviets and republic ministers and departments is greatly increased.

The planning of the construction of public health institutions is based on plans for the development of the network and also on norms for the construction of hospitals and nurseries in industrial enterprises. Now, hospitals must be built based on estimates of 10 hospital beds and 10,000 ambulatory-polyclinic visits a year per thousand workers and members of their families and 12 places in nurseries per hundred working women in enterprises which employ more than 500 working women.

In estimates for the construction of hospitals and nurseries, expenditures for the acquisition of medical and household equipment are provided for according to a table approved by the Ministry of Health USSR.

In planning the construction of hospitals, nurseries, sanatoria and rest homes, we must strive to ensure fully the planned increase in the network of these institutions by constructing new buildings. If the planned expansion of the network is not completely provided with new buildings, a calculation is made so as to provide the remainder of the increase in hospital beds with buildings, which are put at the disposal of local soviet and economic organizations, ministries and departments for this purpose.

In working out a plan for the construction of hospitals,

the necessity must be kept in mind of building larger hospitals which would create conditions for the organization of specialized medical services and would be economical to build and operate.

In 1955 the norms of construction were established, according to which hospitals of a capacity of no less than 100 beds should be built in the cities while in rural rayons, rayon hospitals should have no less than 50 beds.

An important part of the plan for the construction of public health institutions is the plan for designing and prospecting work for future construction, which provides for designs of public health institutions which will be built in the following years.

Preparation in time of designs and estimates for public health projects which are to be constructed and supplying them to construction projects is a necessary condition of the qualitative working out of the construction plan and its successful fulfillment.

In the interests of economy and the reduction of time needed for construction of hospitals, nurseries and other public health institutions, type-designing is widely used.

In accordance with the resolutions of the CC CPSU and the Council of Ministers USSR on the reduction of expenses in design and construction, the Ministry of Health USSR and the ministries of health of the union republics, through their design organizations, worked out changes in a considerable number of type designs for public health institutions. As a result of this re-working of the designs, superfluties were abolished, some sanitary norms were partially revised, and type designs were brought into accord with the norms of enlarging hospitals, nurseries and other objects.

At the present time more type designs exist with more economical indices of construction. Among these may be mentioned the type designs for the construction of an oblast hospital for 400 beds, city hospitals for 300, 240, 120 and 100 beds, a children's hospital for 100 beds, a tuberculosis dispensary for 75 beds, obstetric clinics for 120, 100, 60 and 40 beds, a rural rayon hospital for 50 beds, rural divisional hospitals for 35, 25, and 15 beds, psycho-neurological hospitals for 600 and 300 beds, polyclinics for 500 and 250 visits, nurseries for 120, 100, 80, 60 and 40 places, nurseries-kindergartens for 50 places, sanatoria for 400 and 240 places, rest homes of 250 and 150 places and boarding houses for 200 places, and others.

The Ministry of Health RSFSR on its own initiative in 1957-1958 worked out type designs for the construction of complex city hospitals for 120 and 240 beds, a night

tuberculosis sanatorium for 100 places, sanatoria for 250-400 places, rest homes for 150-250 places, a tuberculosis sanatorium for 240 places, sanatorium buildings of the less complicated type, sanitary-epidemiological stations, blood transfusion stations and others, a situation which permitted a considerable reduction in construction costs.

However, the revision of type designs is as yet far from complete. The cost remains high for the construction of nurseries according to type designs of the Ministry of Health USSR. The cost of construction of one nursery place according to the type design is equal to 10-11 thousand rubles, while actual expenditures in 1957 were 708 thousand rubles. It is extremely necessary to revise these and similar type designs as quickly as possible.

In the title lists of plans of the construction of public health institutions, periods of beginning and completing construction and putting into operation of planned objects were provided in full accord with the periods established for construction of these objects by the Gosstroy USSR.

Expenditures which do not form part of the estimates of objects under construction and which are designed for the acquisition of medical and housekeeping equipment for public health institutions run on a cost accounting basis (sanatoria, disinfection and extermination deratization services which have to be paid for and others are provided for in the general volume of capital investments).

It is very important for the realization of the construction plans for public health institutions to work out in time the plan for contract work for each contractor. It must be kept in mind that the existence of suitable construction organizations and the timely delivery at the place of construction of building materials, assembly parts, mechanisms, etc., is a necessary condition for the fulfillment of the planned program for the construction of public health institutions, especially in rural rayons and in the Far North.

These are the characteristics of planning capital investments in public health services.

The tasks for the construction of public health institutions for a number of the coming years are determined by the control figures for the development of the economy of the USSR for 1959-1965, and also by the state resolutions on concrete problems of the development of public health services.

In working out draft plans for the construction of public health institutions, the planning organ must in the first place ensure capital investments for the measures decided on by the Party and the Government.

## 8. Planning Expenditures for Measures for Safeguarding Water Resources, the Atmosphere, and Soil from Pollution by Industrial Wastes

The directives of the 20th Party Congress for the Sixth Five-Year Plan for the Development of the Economy of the USSR list among tasks for the protection of the health of the population a directive on improving work for safeguarding water resources, the atmosphere, and the soil from pollution by industrial wastes. The problem of abolishing pollution of reservoirs and of the atmosphere is a sanitation and an economic problem of importance for the entire State; this is why so much attention is devoted to it in the directives.

At the present time many rivers are polluted to a considerable extent by impure sewage waters from enterprises of the oil, chemical, paper, metallurgical and light industries and also by other sectors. As a result of the effect of industrial waste waters, sanitary-hygienic indices for drinking and technical purposes are lowered and stocks of fish are reduced; finally, great quantities of oil, cellulose, chemicals, and other raw materials valuable for the economy are ejected with the industrial waste waters.

In cities and workers' settlements enterprises of the metallurgical, coal, chemical and cement industries, electric power stations, various boiler installations and, finally, automobiles, in the absence of the well-constructed gas, dust and ashes consuming installations, spread in the atmosphere considerable quantities of dust, ashes, steam and gases which contain harmful and poisonous material, which can seriously harm the health of the population and of the surrounding plant life.

With the abolition of the above-mentioned shortcomings in mind, the government issued a number of decrees, ordering heads of ministries, departments, councils of ministers of union and autonomous republics and executive committees of local soviets to provide for the construction in industrial enterprises of installations for purifying industrial waste waters and for consuming gas, dust and ashes.

From 1 January 1957, a system of increased fines for enterprises which allow impure waters to pollute water reservoirs was adopted; 20 kopecks per cubic meter. The funds obtained through fines form part of the special accounts of the budgets of union republics and are spent in addition to the capital investments approved by the plan, exclusively for the construction of new and the reconstruction or expansion of existing systems of communal sewers and installa-

tions for purifying waste waters, as well as on measures for sanitary purification of populated localities.

In 1958 in the Russian Federation alone, more than 250 million rubles were assigned from the above-mentioned funds for the construction of city sewerage systems and purification installations, and building materials were provided for them.

The State plans for the development of the economy provide for capital investments for measures designed to eliminate pollution of water reservoirs and the atmosphere by industrial wastes.

The necessary capital investments for the above-mentioned measures are planned according to the following indices:

total volume of expenditures  
including:

expenditures for the construction of installations or departments in existing enterprises for reutilization (recuperation) purposes;

expenditures for the reconstruction of water supply systems for industrial enterprises, so as to raise the coefficient of utilization of the water turnover;

expenditures for installations for the purification of air wastes;

expenditures for other measures to eliminate the harmful influence of industrial wastes in the atmosphere.

It is not difficult to see that the entire complex of measures included in these indices, especially the organization of departments of reutilization, the raising of the coefficient of utilization of water turnover and the construction of installations for the purification of sewerage waters and gas and dust-consuming installations, are aimed at a single goal--the sharp reduction in the pollution of water reservoirs by impure sewerage waters and of the pollution of the atmosphere by harmful materials.

In addition to measures designed to eliminate industrial waste from the atmosphere and from water reservoirs and to purify them, the economic plan provides for measures in working enterprises for the expansion of city sewerage systems and purifying installations, which would take over a considerable part of industrial waste waters, as well as measures for purifying wastes from the ships of the river fleet and rendering them harmless.



## 9. Planning the Medical Industry and the Material-Technical Supply of Public Health Services

The plan for public health services would not be complete if it did not provide for measures for supplying the planned network of public health institutions with medicines, medical equipment, soft and hard inventory and autotransportation. In calculating the needs for medicines, medical instruments, optical equipment, bandages and other articles which are widely used in the public health service, the needs of the persons who acquire these goods in the pharmacies must also be taken into account.

In order to satisfy the needs of the network of public health institutions, and of the population for medicines and other medical articles, a young but continuously developing medical industry has been established in the USSR. In the Fifth Five-Year Plan the medical industry developed considerably and its gross production in 1955 increased by 2.9 times as compared with that of 1950. However, the production of chemical-pharmaceutical preparations -- especially antibiotics, medical instruments and apparatus, lenses and frames for glasses, and medical glass -- is still lagging behind the requirements for them.

Enterprises of the medical industry are being continually expanded and production equipment is being renewed. To improve the work of the medical industry and increase further its production capacity, the Party and the government adopted measures for considerable expansion in the construction of enterprises of the medical industry. It was planned to carry out construction in 1959-60 of 20 new and reconstruct 30 existing enterprises of the medical industry; construction will be also carried on in the eastern rayons of the country. These resolutions are being successfully carried out at present. The control figures for the development of the economy of the USSR for 1959-1965 provide for an output of articles of the medical industry by 1965 of three times that of 1958; the production of medical instruments and apparatus, including apparatus for the use of atomic energy in medicine, is to increase 2-2.5 times. The production of antibiotics will have grown 3.7 times in 1965 as compared to 1958 and the production of vaccines and serums, articles of medical glass and packaged medicines will increase sharply. Some of the new medicines which it is planned to produce are effective antibiotics--terramycin, albomycin, erythromycin, polymyxin, colimycin; of chemical-pharmaceutical preparations: cortisone, salizid, "diplatsin," "kutizone," aminazine and others. The following are among

the most important new instruments and apparatus which industry is planning to study and to produce: apparatus for the diagnosis of tumors, improvement in electrocardiography, apparatus for sewing blood vessels, X-ray machines (kymographs), apparatus for artificial blood circulation, instruments for probing the heart, electric breathing apparatus, kits of surgical instruments for special operations and general operation tables.

A substantial shortcoming in planning the production of medicines and other articles of the medical industry is the lack of scientifically worked-out norms of the needs for various kinds of such production. If norms for the needs for medicines were worked out, it would be possible not only to plan the development of the medical industry in the country more correctly, but also to have a better basis for timely decision of questions of the reduction of costs of some effective medical preparations and for determining fund assignments for the acquisition of medicines per hospital bed for certain illnesses.

The development of the medical industry and the increase in the supply of medicines for the population require a corresponding development in the network of sales institutions -- pharmacies, pharmaceutical points and pharmaceutical warehouses. In 1956, there were 12,951 pharmacies in the USSR and 75,785 pharmaceutical points. Beginning in 1956 the main pharmacy administrations were permitted to build pharmacies and warehouses at the expense of funds accumulated in excess of the plan.

Of no less importance for the activity of the planned network of public health institutions is the material supply of treatment-prophylactic institutions with soft and hard equipment and auto-transport.

Supply of public health enterprises and institutions on the republic and local level with their material needs is undertaken by centralized supply lines--through the Glavsnab of the Ministry of Health USSR--for materials such as cotton, linen and silk cloth, thread, gauze, cotton, blankets, sewing and knitted goods, stockings and socks, dishes, special clothing, special shoes, household soap, leather goods, leather and rubber shoes, automobile spare parts for automobile and automobile rubber, beds, laboratory equipment and paper. The requirements of public health enterprises and organizations for all other kinds of materials and equipment, for fuel, food products and fodder are supplied from the material funds assigned to the councils of ministries of the union republics.

The needs of public health institutions for materials and equipment are determined by norms; for example, the need

for cotton cloth is determined by the following norms:

for one city bed carried over from before per annum	47.7 m
for one new city bed per annum	130.0 m
for one place in city nurseries carried over from before	20.0 m
for one new place in city nurseries	60.3 m
for one sanatorium place carried over from before	15.1 m
for one new sanatorium place	47.4 m

Planning organs must devote attention to improving the supply of public health institutions with furniture, beds, (especially with special, medical beds) laundry, refrigeration and other equipment.

The great tasks which the Party and the government have set for the further improvement of the protection of the health of the Soviet people require a corresponding level in planning the development of national public health services. There is no doubt that in the course of the reorganization of the planning of the economy of the USSR, workers of public health and planning organs will adopt all measures for the further improvement of planning public health services, so as to actively promote the fulfillment of these tasks.

<u>Indices</u>	<u>Units of Measurement</u>	<u>1913</u>	<u>1940</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>
Number of hospital beds (without hospitals)	thousands	207.3	792.0	1288.5	1361.0	1444.0
Supply of Beds	per 10,000 inhabitants	13	41	65	67	70
Obstetric beds	thousands	7.0	147.0	172.4	179.0	188.0
Gynecological & pediatric consultation rooms	single units	9	6301	13429	13876	14250
Places in permanent nurseries	thousands	0.55	859.0	907.2	966.0	1046.0
Sanatorium places	thousands	3.0	239.0	284.0	288.0	294.0
Rest home places	thousands		195.0	160.0	159.0	159.0
Obstetric-fetal clinics	number of institutions	4539	42857	68203	70767	
Pharmacies	number of institutions	--	9723	12749	12951	
Pharmaceutical points	number of institutions		13864	70766	75785	
Physicians (excluding military and dentists)	thousands	23.1	140.8	310.2	329.4	346.0
Physicians available to the population	physicians per 10,000 inhabitants	1.0	7	16	16	17
Secondary medical workers (in system of Ministry of Health USSR)	thousands	--	433.9	845.0	929.6	

# Appendix 1

## Public Health Indices (In a union republic, ministry or department)

1957

<u>Indices</u>	<u>Units of Measurement</u>	<u>Plan</u>	<u>Expected Fulfillment</u>	<u>Draft Plan for 1958</u>
1) Total number of hospital beds including:				
city (without psychoneurological)	thousands			
rural (without psychoneurological)	thousands			
Of the total number hospital beds:				
psychoneurology	thousands			
tuberculosis	thousands			
obstetrics	thousands			
pediatrics (including infectious diseases)	thousands			
2) Total number of places in permanent nurseries maintained on the State budget including:	thousands			
city	thousands			
rural	thousands			
additional places in nurseries maintained by kolkhozes and other cooperative organizations	thousands			
3) Total number of places in sanatoria on the day of maximum use including:	thousands			
year-round sanatoria	thousands			
tuberculosis	thousands			
Total number of rest home places	thousands			
year round	thousands			
4) Number of places in children's homes and homes for children and mothers	places			
5) Fel'dsher-obstetric points	number of institutions			
6) Kolkhoz obstetric clinics	number of institutions			
7) Total number of posts for physicians in medical-sanitary institutions including:	thousands			
in the cities	thousands			
in rural areas	thousands			

## Appendix 2

### Development of Public Health Services (In a union republic, ministry or department)

	<u>Units of Measurement</u>	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
gross production of the medical industry (including production of enterprises subject to departments or sovnarkhozes)	millions of rubles											
Total number of hospital beds including:	thousands											
City (without psychoneurology)	thousands											
rural (without psychoneurology)	thousands											
of the total number of hospital beds:												
psychoneurology	thousands											
Total number of places in permanent nurseries maintained on the State budget including:	thousands											
city	thousands											
rural	thousands											
Total number of sanatorium places on the day of maximum use including year-round sanatoria	thousands thousands											
Total number of places in houses of rest of these--year-round	thousands thousands											

### Appendix 3

## Construction of Public Health projects in a Union Republic or Department

	<u>Units of Measurement</u>	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1959	1965
1) Total volume of capital in-	millions of												
vestment	rubles												
including:													
hospitals	"												
nurseries	"												
sanatoria	"												
rest homes	"												
2) Putting into operation													
hospitals	beds												
nurseries	places												
sanatoria	places												
rest homes	places												

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